

trim of 10 degrees and list of 20 degrees either way;

(5) Those survival craft that are provided for use in conjunction with a marine evacuation system, and stowed for launching directly from the stowed position under unfavorable conditions of trim of 10 degrees and list of 20 degrees either way; or

(6) Liferrafts installed on liftboats.

(d) Each launching appliance must be arranged so that the fully equipped survival craft the launching appliance serves can be safely launched against unfavorable conditions of trim of up to 10 degrees either way and of list of up to 20 degrees either way,—

(1) When the survival craft is loaded with its full complement of persons; and

(2) When not more than the required operating crew is on board.

(e) A launching appliance must not depend on any means other than gravity or stored mechanical power, independent of the OSV's power supplies, to launch the survival craft the launching appliance serves, in the fully loaded and equipped condition, and also in the light condition.

(f) Each launching appliance's structural attachment to the OSV must be designed to be at least 4.5 times—

(1) The load imparted on the attachment by the launching appliance and its fully loaded survival craft under the most adverse combination of list and trim as required under paragraph (b) of this section; and

(2) The ultimate strength of the construction material.

(g) Each launching appliance must be arranged so that—

(1) All parts requiring regular maintenance by the OSV's crew are readily accessible and easily maintained;

(2) The launching appliance remains effective under conditions of icing;

(3) The same type of release mechanism is used for each similar survival craft carried on board the OSV;

(4) The preparation and handling of each survival craft at any one launching station does not interfere with the prompt preparation and handling of any other survival craft at any other station;

(5) The persons on board the OSV can safely and rapidly board the survival craft;

(6) Each davit-launched liferaft can be boarded by its full complement of persons within 3 minutes from the time the instruction to board is given; and

(7) During preparation and launching, the survival craft, its launching appliance, and the area of water into which it is to be launched is illuminated by lighting supplied from the emergency source of electrical power.

(h) Each launching mechanism must be arranged so it may be actuated by one person, both from a position on the OSV's deck, and from a position within the survival craft. Each launching and recovery arrangement must allow the operator on the deck to observe the survival craft at all times during launching.

(i) Means must be provided outside the machinery space to prevent any discharge of water onto survival craft during abandonment.

[CGD 84-069, 61 FR 25304, May 20, 1996, as amended at 63 FR 52816, Oct. 1, 1998]

**§ 133.153 Survival craft launching and recovery arrangements using falls and a winch.**

Survival craft launching and recovery arrangements, in addition to meeting the requirements in § 133.150, must meet the following requirements:

(a) Each fall wire must be of rotation-resistant and corrosion-resistant steel wire rope.

(b) The breaking strength of each fall wire and each attachment used on the fall must be at least six times the load imparted on the fall by the fully-loaded survival craft.

(c) Each fall must be long enough for the survival craft to reach the water with the OSV in its lightest seagoing condition, under unfavorable conditions of trim and with the OSV listed not less than 20 degrees either way.

(d) Each unguarded fall must not pass near any operating position of the winch, such as hand cranks, pay-out wheels, and brake levers.

(e) Each winch drum must be arranged so the fall wire winds onto the drum in a level wrap. A multiple drum winch must be arranged so that the falls wind off at the same rate when

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lowering, and onto the drums at the same rate when hoisting.

(f) Each fall, where exposed to damage or fouling, must have guards or equivalent protection. Each fall that leads along a deck must be covered with a guard that is not more than 300 millimeters (1 foot) above the deck.

(g) The lowering speed for a fully loaded survival craft must be not less than that obtained from the following formula:

(1)  $S = 0.4 + (0.02 H)$ , where  $S$  is the speed of lowering in meters per second, and  $H$  is the height in meters from the davit head to the waterline at the lightest seagoing condition.

(2)  $S = 79 + (1.2 H)$ , where  $S$  is the speed of lowering in feet per minute, and  $H$  is the height in feet.

(h) The lowering speed for a survival craft loaded with all of its equipment must be not less than 70 percent of the speed required under paragraph (g) of this section.

(i) The lowering speed for a fully loaded survival craft must be not more than 1.3 meters per second (256 feet per minute).

(j) If a survival craft is recovered by electric power, the electrical installation, including the electric power-operated boat winch, must meet the requirements in part 129 of this chapter. If a survival craft is recovered by any means of power, including a portable power source, safety devices must be provided which automatically cut off the power before the davit arms or falls reach the stops in order to avoid overstressing the falls or davits, unless the motor is designed to prevent such overstressing.

(k) Each launching appliance must be fitted with brakes that meet the following requirements:

(1) The brakes must be capable of stopping the descent of the survival craft or rescue boat and holding it securely when loaded with its full complement of persons and equipment.

(2) The brake pads must, where necessary, be protected from water and oil.

(3) Manual brakes must be arranged so that the brake is always applied unless the operator, or a mechanism acti-

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vated by the operator, holds the brake control in the off position.

[CGD 84-069, 61 FR 25304, May 20, 1996; 61 FR 40281, Aug. 1, 1996]

### § 133.160 Rescue boat embarkation, launching and recovery arrangements.

(a) Each davit for a rescue boat must be approved under approval series 160.132 with a winch approved under approval series 160.115. If the launching arrangement uses a single fall, the davit may be of a type which is turned out manually, and the release mechanism may be an automatic disengaging apparatus approved under approval series 160.170 instead of a lifeboat release mechanism. Each rescue boat must be able to be boarded and launched directly from the stowed position with the number of persons assigned to crew the rescue boat on board. If the rescue boat is also a lifeboat and the other lifeboats are boarded and launched from an embarkation deck, the arrangements must be such that the rescue boat can also be boarded and launched from the embarkation deck.

(b) Each rescue boat must be capable of being launched with the OSV making headway of 5 knots in calm water. A painter may be used to meet this requirement.

(c) Each rescue boat embarkation and launching arrangement must permit the rescue boat to be boarded and launched in the shortest possible time.

(d) Rapid recovery of the rescue boat must be possible when loaded with its full complement of persons and equipment.

(e) Each rescue boat launching appliance must be fitted with a powered winch motor.

(f) Each rescue boat launching appliance must be capable of hoisting the rescue boat when loaded with its full rescue boat complement of persons and equipment at a rate of not less than 0.3 meters per second (59 feet per minute).

[CGD 84-069, 61 FR 25304, May 20, 1996, as amended at 63 FR 52816, Oct. 1, 1998]

### § 133.170 Line-throwing appliance.

(a) *General.* Each OSV must have a line-throwing appliance that is approved under approval series 160.031 or 160.040.